

EGYPTIAN MISSILE IDENTIFIED BY U.S.

Soviet-Made Naval Weapon Called Styx Has No Real Equivalent in West

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WASHINGTON, Oct. 23—The missiles employed by the Egyptians to sink the Israeli destroyer Elath on Saturday were apparently the Soviet-made ship-to-ship type called the Styx by the Western allies.

No real equivalent of this missile exists in the United States Navy or other Western navies. The Styx and more advanced Soviet ship-to-ship missiles have been considered a potential threat since they first came to the attention of the United States Navy during the Cuban blockade of 1962.

There has been concern that the Russians might provide these missiles to the North Vietnamese for use against the Seventh Fleet in the Gulf of Tonkin. Moscow has apparently not yet supplied Hanoi with these missiles.

However, China possesses an early and less effective version of the Styx and, for this reason, the movements of Chinese guided-missile patrol boats in the Gulf of Tonkin are kept under continual surveillance.

The Styx is a subsonic cruise missile with a 1,000-pound high explosive warhead and a range of 20 to 25 miles.

The Styx is also capable of carrying a nuclear warhead, but it is believed that the Soviet Union has not provided the Egyptians with any nuclear devices.

About 20 feet long and shaped like an airplane with stubby delta wings and three

tail fins to provide stabilization. The Styx became operational in the Soviet navy in 1959.

The Egyptian navy acquired the missiles in 1962 when it was given three Komar-class guided-missile patrol boats by the Soviet Union. Cuba was provided with 12 such craft the same year.

The Komar-class vessels are fast 75-ton attack craft with a top speed of 40 knots. They carry two launchers for Styx missiles on the aft section behind the engine.

Egypt may also have been given, over the past year, a few larger 160-ton Osa-class boats with four Styx launchers each.

There is some indication that in Saturday's incident the missiles may have been fired from a stationary position within Port Said harbor.

No evidence exists here that the missiles were fired by Soviet advisers to the Egyptian navy. Naval observers do not consider the Styx a complicated missile to operate and they believe the Egyptians would have had ample time over the last five years to learn to fire it.

Technical Role Seen

But Soviet technicians may have played a key role in keeping the missiles in working order since the Egyptians have displayed consistent weakness in this area when left to themselves.

To fire the Styx, the crew of the patrol craft first detects and fixes the general position of the opposing vessel on the patrol craft's radar. This can be done either while the patrol craft is stationary or while it is moving toward the target.

The crewmen then set the missile's autopilot on a course toward the target. A jettisonable, solid-propellant rocket motor slung under the rear fuselage of the Styx is fired,

and the missile roars off the launcher.

As soon as the missile gains speed and altitude, this rocket motor is automatically dropped into the sea, the missile's own rocket motor takes over and the autopilot guides the Styx towards the target.

When the Styx gets close to the target a homing device within the missile detects the opposing ship, assumes control of the missile and by feeding information to the autopilot, guides the Styx to its destination.

The standard Styx homing device is reported to be a radar type. Some trained observers have speculated from the circumstances of Saturday's incident that the missiles used by the Egyptians may have been equipped with more modern infra-red heat-seeking homing devices.

The Israeli crew reported that the first missile struck amidships and the second smashed into the engine room, the greatest source of heat aboard the destroyer.

The American Talos-Terrier and Tartar ship-to-air missiles have a limited ship-to-ship capability, but are not considered a match for the Styx. Some officers have contended that the United States should develop an effective ship-to-ship missile.

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